

## CLAIMS

1. A method for transmitting information from an interrogator system to portable objects; in this method the information is transmitted through radio carrier wave amplitude modulation over several time intervals called "pulses" and positional coding of these pulses, the characteristics of which are as follows:

- ternary amplitude modulation is used in which the first amplitude level (B) is used with a second level (A) below the first and a third level (C) above the first (B), whereby the modulation either passes from the first level (B) to the second (A) (and is then called negative polarity) or from the first level (B) to the third (C) (and is then called positive polarity);
- positional coding is obtained by forming two opposite-polarity pulses ( $I_1$  and  $I_2$ ) in the same pattern, in which the position concerned is that of the second pulse ( $I_2$ ) relative to the first ( $I_1$ ).

2. A method in accordance with claim 1, whereby the information is grouped into messages made up of a sequence of patterns and whereby each of said patterns is associated with an information symbol and contains a code time area (Z) divided into N identical time units, each of  $T_c$  length where  $T_c$  at least equals the length of the pulses ( $I_1$ ) in any of the N time units in the code time area (Z).

3. A method in accordance with claim 2, whereby the number of time units (N) within the code time area (Z) equals  $2^M$ , where M is an integer; the information symbol

transmitted by each pattern then consists in a binary word containing M bits.

4. A method in accordance with claim 2, whereby each  
5 message is structured in frames, each of which is made up of  
a first pattern called the Start Of Frame (SOF) marker  
comprised of a time area (Z) divided into N time units ( $T_C$ ),  
a first pulse ( $I_1$ ) placed before this area and a second  
pulse ( $I_2$ ) with the same polarity as the first ( $I_1$ ) and,  
10 within this area, the said Start of Frame (SOF) marker,  
which is followed by patterns associated with the message's  
information symbols.

5. A method in accordance with claim 4, whereby the  
15 Start Of Frame (SOF) marker's second pulse ( $I_2$ ) is always  
placed in the same time unit in the time area (Z).

6. A method in accordance with claim 5, whereby the  
Start Of Frame (SOF) marker's second pulse ( $I_2$ ) is always  
20 placed in the last time unit in the time area (Z).

7. A method in accordance with claim 4, whereby the  
frame also contains a last pattern, called the End Of Frame  
(EOF) marker, made up of a time area (Z) with no pulse and a  
25 pulse ( $I_1$ ) placed before said area.

8. A method in accordance with claim 4, whereby a first  
guard time ( $T_{G1}$ ), the duration of which is a multiple ( $K_1$ )  
of the time unit ( $T_C$ ), is placed between the first pulse  
30 ( $I_1$ ) and the end of the time area (Z).

9. A method in accordance with claim 8, whereby a second guard time ( $T_{g2}$ ), the duration of which is a multiple ( $K_2$ ) of the time unit ( $T_c$ ), is placed after the time area (Z).

5        10. A method in accordance with claim 4, whereby, in each pattern, the time area (Z) is followed by a wait time ( $T_a$ ).

10       11. A method in accordance with claim 10, whereby the length of the wait time ( $T_a$ ) is modified for different patterns depending on transmission conditions.

15       12. A method in accordance with claim 10, whereby the length of the wait time ( $T_a$ ) is modified depending on the length of the messages that the portable objects retransmit.

13. A method in accordance with one of the above claims, whereby the first pulse ( $I_1$ ) is of negative polarity.

20       14. A method in accordance with any one of the above claims, whereby the amplitude modulation index is lower than 50%.